

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	"Encryption system resists differential power analysis attacks"	USPAT	OR	ON	2007/08/09 17:00
L2	1	"Encryption system resists differential power analysis attacks"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 17:11
L3	1	"6937727".pn.	USPAT	OR	ON	2007/08/09 17:10
L4	2	"6937727".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 17:10
L5	2	"20040047466"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 17:11
L6	2	"7194090".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 17:12
L7	2	"20020191784"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 17:12
L8	2	"20010053220"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 17:14

## EAST Search History

L9	3	"20020027987"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 17:20
S1	0	(10/749412).CCLS.	US-PGPUB; USPAT; USOCR; DERWENT; IBM_TDB	OR	OFF	2007/07/22 06:05
S2	0	(10/749412).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/07/22 06:05
S3	0	(10/749412).CCLS.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/07/22 06:05
S4	1	10/749412	US-PGPUB; USPAT; USOCR; DERWENT; IBM_TDB	OR	ON	2007/07/22 06:22
S5	1335	380/28.ccls.	US-PGPUB; USPAT; USOCR; DERWENT; IBM_TDB	OR	ON	2007/07/22 06:23
S6	0	ochi-ryp-\$.in.	US-PGPUB; USPAT; USOCR; DERWENT; IBM_TDB	OR	ON	2007/07/22 06:23
S7	0	ochi-ryo-\$.in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/22 06:24

## EAST Search History

S8	11522	ochi-\$.in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/22 06:24
S9	28	ochi-\$.in. AND ryo	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/22 06:27
S10	1	kusakabe-susumu-\$.in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/22 06:27
S11	3420	kusakabe-\$.in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/22 06:27
S12	300	kusakabe-\$.in. AND susumu	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/26 10:10
S13	161	encryption SAME (power near analysis)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/22 07:18
S14	2	"6970561".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/22 07:22

## EAST Search History

S15	2	"6658569".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/22 07:25
S16	2	"7050581".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/22 07:25
S21	105	encryption WITH (power near2 analysis)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/26 10:25
S22	8	S21 and 713/189.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/26 10:18
S23	170	encryption SAME (power near2 analysis)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/26 10:26
S25	2061	(380/28-29 OR 380/37).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/26 10:29
S26	3876	(380/28-29 OR 380/37 OR 713/193).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/26 10:30

## EAST Search History

S27	12400	(380/28-30 OR 380/37 380/45-46 380/281 OR 380/277 OR 380/259 OR 713/193 OR 713/189-191 713/300 OR 713/330 OR 726/26). cccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/26 10:45
S28	376	original near encryption	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/26 10:46
S30	11	divid\$4 with encryption NEAR3 sequence	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 06:26
S40	1	10/749412 AND "dummy encryption process"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 12:33
S41	61	divid\$4 with encryption with group	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 09:49
S43	27	mix\$4 with encryption with sequence	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 16:23
S44	1	S41 and S43	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 09:45

## EAST Search History

S45	35	encryption near process\$4 near sequence	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 10:31
S46	2	(encryption near process\$4 near sequence) SAME power	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 09:50
S47	0	"09749142"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 10:31
S48	0	"09/749142"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 10:31
S49	48	S near box with (round adj function)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 10:58
S50	1	10/749412 AND (plurality NEAR2 group)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 12:36
S51	1	10/749412 AND (plurality NEAR2 "encryption")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 13:04

## EAST Search History

S52	2	"6327661".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 13:28
S53	151	mix\$4 NEAR2 encryption	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 13:33
S54	3	mix\$4 NEAR2 encryption with sequence	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 13:29
S55	12400	(380/28-30 OR 380/37 380/45-46 380/281 OR 380/277 OR 380/259 OR 713/193 OR 713/189-191 713/300 OR 713/330 OR 726/26). ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 13:33
S56	41	S53 AND S55	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 15:00
S57	36	mix\$4 ADJ encryption	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 15:03
S58	21	mix\$4 ADJ encryption and sequence	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 15:04

## EAST Search History

S59	1	mix\$4 ADJ encryption with sequence	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 15:05
S60	388	(mix\$4 combin\$4 merg\$4)ADJ encryption	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 15:08
S61	11	(mix\$4 combin\$4 merg\$4)ADJ encryption with sequence	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 15:08
S63	276	S60 AND @ay<="2003"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 15:09
S64	387	S60 AND @ay<="20030108"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 15:09
S65	226	S60 AND @ad<="20030108"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 15:10
S66	0	S60 AND @ad<="20030108" with sequence	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 15:10



## EAST Search History

S67	0	S60 AND @ad<="20030108" SAME sequence	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 15:10
S68	145	S60 AND @ad<="20030108" AND sequence	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 15:10
S69	229	encryption WITH ("power analysis" "PA" "SPA" "simple power analysis" "DPA" "differential power analysis")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 15:55
S70	229	encryption WITH ("power analysis" "PA" "SPA" "simple power analysis" "DPA" "differential power analysis")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 15:55
S71	0	("2007/0140478").URPN.	USPAT	OR	ON	2007/07/30 15:56
S72	0	("2007/0139194").URPN.	USPAT	OR	ON	2007/07/30 15:56
S73	0	("2006/0056622").URPN.	USPAT	OR	ON	2007/07/30 16:03
S74	0	("2004/0096059").URPN.	USPAT	OR	ON	2007/07/30 16:23
S75	381	(mix\$4 stir\$4 combin\$4) ADJ encryption	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 16:24
S76	12	(mix\$4 stir\$4 combin\$4) ADJ encryption with sequence	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/30 16:24

## EAST Search History

S77	2	"7146499".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/02 15:13
S78	1	"7146499".pn. AND ("fake" OR "dummy") WITH data	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/02 15:17
S79	939	cipher NEAR algorithm	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/02 15:29
S81	989	(380/27 280/28 380/29).cccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/02 15:21
S83	365	(cipher NEAR algorithm) with encryption	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/02 15:25
S84	9	(cipher NEAR algorithm) with encryption with round	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 08:18
S86	26	(cipher NEAR algorithm) WITH round	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/02 15:30

## EAST Search History

S88	9	(cipher NEAR algorithm) WITH round with encryption	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/02 15:31
S90	2797	block NEAR cipher	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 08:18
S94	47	(block NEAR cipher) WITH round WITH encryption	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 08:43
S98	89	(divid\$4 WITH (encrypt\$4 WITH "sequence"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 09:11
S99	89	((divid\$4 or seperat\$4) WITH (encrypt\$4 WITH "sequence"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 09:11
S100	15	(encrypt\$4 WITH "sequence") WITH ("plurality" OR "many" OR "several") WITH group	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 09:40
S101	4	S99 and S100	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 11:13

## EAST Search History

S10 2	1	encryption with sequence	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 09:18
S10 3	3667	encryption with sequence	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 09:18
S10 4	989	(380/27 280/28 380/29).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 09:18
S10 5	66	S103 and S104	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 09:19
S10 6	61	S105 AND @ad<="20030108"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 09:19
S10 7	68	(encrypt\$4 WITH "sequence") WITH ("plurality" OR "many" OR "several") WITH (group or UNIT)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 09:43
S10 8	9	S99 and (encrypt\$4 WITH "sequence") WITH ("plurality" OR "many" OR "several") WITH (group or UNIT)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 09:47

## EAST Search History

S10 9	1	S99 and (encrypt\$4 WITH "sequence") WITH (("dummy" OR "fake" OR "false") with data)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 09:50
S11 0	2	S99 and (encrypt\$4 WITH "sequence") WITH (("dummy" OR "fake" OR "false") with encryption)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 10:00
S11 1	2	"20010046296"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 10:04
S11 2	74	"DES" WITH (dummy OR dummies) WITH data	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 10:18
S11 3	553	"DES" WITH (dummy OR dummies)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 10:18
S11 4	42	"DES" WITH (dummy OR dummies) with operation	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 10:29
S11 6	47	"DES" WITH ("dummy" OR dummies OR "fake" OR "faste") with (operation or calculation)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 10:25

## EAST Search History

S13 1	7677920	"DES" "block cipher"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 11:29
S13 2	6827	("DES" "block cipher") WITH round	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 11:29
S13 3	196	("DES" "block cipher") WITH round with function	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 11:29
S13 4	42	("DES" "block cipher") WITH round with function with encryption	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 11:30
S13 5	2	"5168521".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/05 11:30
S13 6	2	"5168521".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/08 15:36
S13 7	1	10/885148	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/08 15:36
S13 8	0	("2005/0055596").URPN.	USPAT	OR	ON	2007/08/08 16:06

## EAST Search History

S13 9	606	dummy NEAR3 processing	USPAT	OR	ON	2007/08/08 16:06
S14 0	2	dummy NEAR3 processing with encryption	USPAT	OR	ON	2007/08/08 16:08
S14 1	119	encryption SAME dummy	USPAT	OR	ON	2007/08/08 16:08
S14 2	0	encryption SAME dummy with round	USPAT	OR	ON	2007/08/08 16:08
S14 3	0	encryption SAME dummy same round	USPAT	OR	ON	2007/08/08 16:09
S14 4	1042	block near cipher	USPAT	OR	ON	2007/08/08 16:09
S14 5	476	(block near cipher) with encryption	USPAT	OR	ON	2007/08/08 16:56
S14 8	704	round near function	USPAT	OR	ON	2007/08/08 16:10
S14 9	45	S145 and S148	USPAT	OR	ON	2007/08/08 16:11
S15 1	2	S145 and S148 and dummy	USPAT	OR	ON	2007/08/08 16:25
S15 2	0	"200502273631"	USPAT	OR	ON	2007/08/08 16:25
S15 3	0	"20050273631"	USPAT	OR	ON	2007/08/08 16:26
S15 4	0	"20050273631"	USPAT	OR	ON	2007/08/08 16:29
S15 5	1	"7194090".pn.	USPAT	OR	ON	2007/08/08 17:30
S15 6	1	"6061449 ".pn.	USPAT	OR	ON	2007/08/08 16:39
S15 7	0	"20060140401"	USPAT	OR	ON	2007/08/08 16:39
S15 8	0	"System and method for protecting computer software from a white box attack"	USPAT	OR	ON	2007/08/08 16:40
S15 9	0	"computer software from a white box attack"	USPAT	OR	ON	2007/08/08 16:40
S16 0	6	"white box attack"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/08 16:40

## EAST Search History

S16 1	11	(block near cipher) with encryption with round	USPAT	OR	ON	2007/08/08 17:16
S16 2	2	"20050213756"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/08 17:10
S16 3	2	"20030223580"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/08 17:10
S16 4	0	(block near cipher) with encryption with dummy	USPAT	OR	ON	2007/08/08 17:16
S16 5	1	(block near cipher) with encryption same dummy	USPAT	OR	ON	2007/08/08 17:17
S16 6	1	(block near cipher) same encryption same dummy	USPAT	OR	ON	2007/08/08 17:17
S16 7	8	(block near cipher) same encryption same dummy	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/08 17:25
S16 8	9	(block near cipher) same encryption same (dummy or fake or false)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/08 17:45
S16 9	0	"7194090".pn. AND (dummy WITH "block cipher")	USPAT	OR	ON	2007/08/08 17:30
S17 0	1	"7194090".pn. AND (dummy)	USPAT	OR	ON	2007/08/08 17:45
S17 1	0	"7194090".pn. AND (dummy WITH round)	USPAT	OR	ON	2007/08/08 17:45
S17 2	9	(block near cipher) same dummy	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 06:23



## EAST Search History

S17 3	0	(S-box near2 exryption)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 06:23
S17 4	0	(S-box near2 exryption)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 06:23
S17 5	53	(S-box near2 encryption)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 06:23
S17 6	4	(S-box near2 encryption) with cipher	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 06:27
S17 7	2	"6295606".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 06:28
S17 8	1	"20070140478"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 06:36
S17 9	0	ierative-block	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 06:36

## EAST Search History

S18 0	5	iterative-block	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 06:39
S18 1	4265546	round near S174 function	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 06:39
S18 2	2291	round near2 function	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 08:32
S18 3	57	(round near2 function) near5 cipher	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 06:41
S18 4	0	("2004/0008841").URPN.	USPAT	OR	ON	2007/08/09 06:42
S18 5	96	(round near2 function) WITH cipher	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 08:33
S18 6	357	round WITH cipher	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 08:34
S18 7	110	round WITH cipher with encryption	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 08:40

## EAST Search History

S18 8	992	(380/27 280/28 380/29).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 08:34
S18 9	11	S188 and S187	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 08:37
S19 1	2349	triple NEAR DES	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 09:32
S19 2	40	S188 AND S191	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 09:32
S19 3	1	"20040193898" AND random	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 10:00
S19 4	964494	"AES"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 11:20
S19 5	325	"AES" AND Rijndael	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 11:19

## EAST Search History

S19 6	8	S195 and S188	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 11:19
S19 7	964557	"AES" or "Advanced encryption Standard"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 11:20
S19 8	5893	("AES" or "Advanced encryption Standard") WITH mix\$4	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 11:22
S19 9	21	("AES" or "Advanced encryption Standard") WITH mix\$4 with encryption	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 11:21
S20 0	9422	("AES" or "Advanced encryption Standard") WITH (mix\$4 OR compound\$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 11:23
S20 1	42	("AES" or "Advanced encryption Standard") WITH (mix\$4 OR compound\$4) same encryption	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 11:32
S20 2	21	("AES" or "Advanced encryption Standard") WITH (mix\$4 OR compound\$4) WITH encryption	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 13:11

## EAST Search History

S20 3	174	("AES" or "Advanced encryption Standard") WITH (mix\$4 OR compound\$4) WITH (encryption sequence column)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 13:12
S20 4	21	("AES" or "Advanced encryption Standard") WITH (mix\$4 OR compound\$4) WITH (encryption sequence column) with encryption	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 13:12
S20 5	2	"7236593".pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/08/09 13:40
S20 6	0	("7236593").URPN.	USPAT	OR	ON	2007/08/09 13:44
S20 8	1	"6937727".pn. and mix\$	USPAT	OR	ON	2007/08/09 17:00

Google Patent Search "advanced encryption standard" WITH mixing

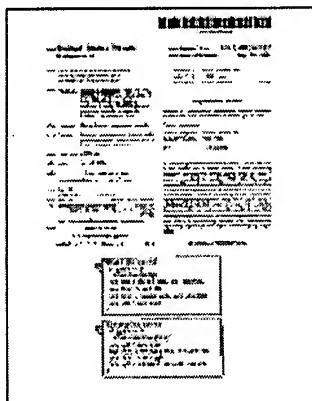
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# Method of scrambling and descrambling data in a communication system

Douglas A. Kuhlman et al

## Patent summary


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### Abstract

A scrambling method (510) divides a set of data (200) into a first portion and a second portion. A first scrambling method is performed on the first portion of the set of data to create a scrambled first portion of the data. The second portion of the set of data is modified with the scrambled first portion of the set of data to create a modified second portion of the set of data. A second scrambling method is performed on the modified second portion of the set of data to create a scrambled second portion of the set of data. The scrambled first portion of the set of data is modified with the scrambled second portion of the set of data to create a scrambled set of data (220). A descrambling method (520) reverses the scrambling method (510) to create a descrambed set of data (200).

**Patent number:**  
7099469

**Filing date:** Oct 17, 2001

**Issue date:** Aug 29, 2006

**Inventors:** Douglas A. Kuhlman, Thomas S.

## Claims

What is claimed is:

1. A scrambling method for use in a communication system, the method comprising the steps of:

dividing a set of data into a first portion and a second portion;  
performing a first scrambling method on the first portion of the set of data to create a scrambled first portion of the data;  
modifying the second portion of the set of data with the scrambled first portion of the set of data to create a modified second portion of the set of data;  
performing a second scrambling method on the modified second portion of the set of data to create a scrambled second portion of the set of data; and  
modifying the scrambled first portion of the set of data with the scrambled second portion of the set of data to create a scrambled set of data, wherein the scrambled set of data is stored in a source device and wherein the first and second scrambling methods recursively execute the above steps until the portion of the set of data to be scrambled reaches a predetermined length.

2. The scrambling method of claim 1 wherein the predetermined length is one byte.

3. The scrambling method of claim 1 further comprising the step of performing a predetermined function on the set of data once the portion of the set of data to be scrambled reaches the predetermined length.

4. The scrambling method of claim 3 wherein the predetermined function is an invertible function.

5. The scrambling method of claim 4 wherein the invertible function is a lookup function.

6. The scrambling method of claim 1 wherein the steps of modifying are invertible.

7. The scrambling method of claim 1 wherein the steps of modifying are selected from a group consisting of: exclusive-or, modular addition, and modular subtraction.

8. The scrambling method of claim 1 further



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### 1 [Book reviews: Review of "Data Privacy and Security by David Salomon"; Springer-Verlag, 2003, \\$51.48, Hardcover.](#)


 Nick Papanikolaou  
June 2005 **ACM SIGACT News**, Volume 36 Issue 2

Publisher: ACM Press

Full text available: pdf(2.56 MB)

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The field of cryptology and data security hardly needs any introduction; numerous popular accounts of the subject have appeared over the years, and it is already a core topic in undergraduate computer science. The very term "cryptology" is testimony to the long history of the field; the term is derived from the words κρυπτός (meaning hidden), and λόγος (meaning speech), which have retained their meaning in the Greek language for many centuries.

### 2 [Embedded systems: applications, solutions and techniques \(EMBS\): Efficient AES implementations for ARM based platforms](#)



Kubilay Atasu, Luca Breveglieri, Marco Macchetti

 March 2004 **Proceedings of the 2004 ACM symposium on Applied computing SAC '04**

Publisher: ACM Press

Full text available: pdf(147.45 KB)

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The Advanced Encryption Standard (AES) contest, started by the U.S. National Institute of Standards and Technology (NIST), saw the Rijndael [13] algorithm as its winner [11]. Although the AES is fully defined in terms of functionality, it requires best exploitation of architectural parameters in order to reach the optimum performance on specific architectures. Our work concentrates on ARM cores [1] widely used in the embedded industry. Most promising implementation choices for the common ARM Ins ...

**Keywords:** AES, ARM microprocessor, cache memories, code optimisation

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Ahmad M. Kholaf, Magda B. Fayek, Hussein S. Eissa, Hoda A. Baraka

 October 2005 **Proceedings of the 2nd ACM international workshop on Performance evaluation of wireless ad hoc, sensor, and ubiquitous networks PE-WASUN '05**

Publisher: ACM Press